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ABSTRACT

This publication defines and illustrates approximately 80 terms and concepts that are crucial to understanding the Educational Management Project, a comprehensive inservice program for educational administrators that was developed by the Tucson Public Schools. Annotations for the individual terms vary in length from approximately 30 to 350 words and are cross-referenced to other related concepts. Included are terms dealing with such topics as accountability, classical management theory, decision-making and problem-solving theory, and the systems approach to management. (JG)

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THE EDUCATIONAL MANAGEMENT PROJECT

E.S.E.A. TITLE III

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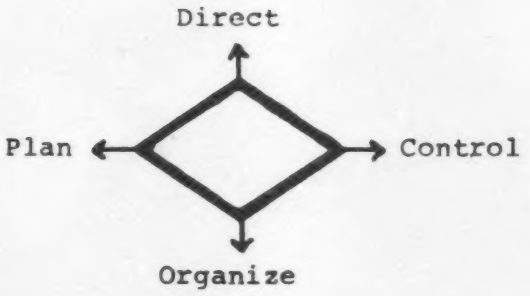
A GLOSSARY OF TERMS USED BY THE EDUCATIONAL MANAGEMENT PROJECT



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PREFACE

This glossary has been compiled to aid in the understanding of the concepts being introduced to administrators participating in the Educational Management Project's inservice training program. The intent of the Project is to help educational administrators sharpen their decision-making skills through a more precise understanding of the functions of the educational manager and the appropriate methods and procedures for performing these functions. In pursuing its goal, the Project has introduced new concepts and has, in some cases, redefined some more traditional ones. As a result, the participants in the Project's training program have been exposed to a rather large body of unfamiliar terminology. Hopefully, this glossary will help to avoid or dispel some of the confusion which is likely to occur.

ACCOUNTABILITY

"The process of expecting each member of an organization to answer to someone for doing specific things according to specific plans and against certain timetables to accomplish tangible performance results. It assumes that everyone who joins an organization does so presumably to help in the achievement of its purposes; it assumes that individual behavior which contributes to these purposes is functional and that which does not is dysfunctional" (Lopez, 1970, p. 231).

"Accountability is the product of a process. At its most basic level, it means that an agent, public or private, entering into a contractual agreement to perform a service will be held answerable for performing according to agreed-upon terms, within an established time period, and with a stipulated use of resources and performance standards" (Lessinger, 1970, p. 217).

ACTIVITY (TASK)

The basic unit of a procedure or process. At any particular stage of the planning process, the task or activity is the unit of work most specifically defined. As planning proceeds, activities for accomplishing objectives are identified at successively lower levels of specificity, from the more general to the more specific.

[See also: Procedure, Strategy.]

ALTERNATIVE

Any solution strategy which will eliminate the performance discrepancy between the current level of performance ("What is") and the desired level of performance ("What ought to be"). A rational decision cannot be made unless the decision maker can identify at least two alternative strategies for solving the problem under consideration.

BEHAVIOR DESCRIPTION

A written or verbal communication technique whose purpose is to improve one's ability to distinguish observable (overt) behaviors and actions from behaviors which must be inferred (covert behaviors).
Examples:

> Math teacher to visiting parent: "Your son is not learning the metric system satisfactorily [covert or inferred behavior]; he was unable to list the metric system prefixes in the proper order on the last written test [observable or overt behavior]."

"At the completion of a state department workshop, sixth grade teachers will demonstrate their application of PPBS principles [inferred behavior] as measured by a minimum score of 90 on a staff developed proficiency exam [observable behavior]" (Performance and Process Objectives, 1970, p. 28).

BUDGET

"A statement of expected results expressed in numerical terms. It may be expressed in financial terms or in terms of man-hours, units of product, machine-hours, or any other numerically measurable term" (Koontz and O'Donnell, 1964, p. 77).

As a "statement of expected results," a budget is a plan. Generally speaking, a budget is not an adequate instrument for controlling the operation of a program by itself, but it is a very valuable instrument for control if accompanied by other types of plans such as objectives, policies, procedures, rules, programs and/or strategies.

A budget reflects plans in the sense that it establishes a standard for the expenditure of time and effort in the accomplishment of program objectives. In order to establish reasonable standards, the educational manager must first establish standards of performance for his program by formulating measurable objectives and selecting and defining the methods and procedures to be used in accomplishing these objectives.

BUREAUCRATIC ORGANIZATIONAL MODEL

See Classical Organizational Model.

CIPP EVALUATION MODEL

A taxonomy for the classification of the four major kinds of evaluation subprocesses which supply information for the making of educational management decisions. These four subprocesses are:

--Context Evaluation: Collecting, analyzing and reporting information about the environment (context) to be served by a projected educational program; identifying unmet needs, and unused opportunities and possible causes of discrepancies between actual and intended program outcomes.
--Input Evaluation: Collecting, analyzing and reporting information about how to meet program objectives and solve identified problems; identifying available assistance and possible strategies for accomplishing program objectives.
--Process Evaluation: Collecting, analyzing and reporting information about the degree to which an educational program is implemented as it was planned; detecting and predicting possible implementation defects and keeping records of implementation activities.
--Product Evaluation: Collecting, analyzing and reporting information about the degree to which an educational program accomplishes its objectives; identifying levels of accomplishment and their causal relationships to program activities.

(Stufflebeam, et al., 1971)

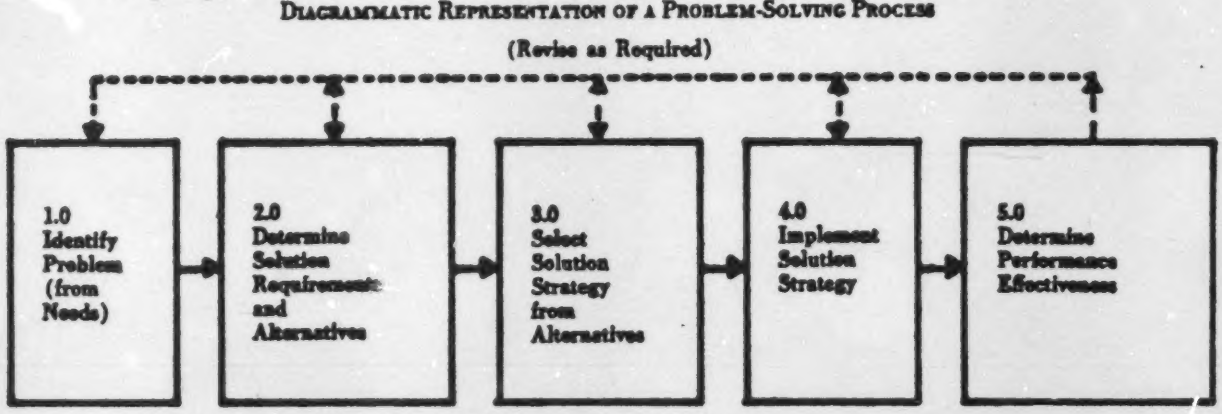
CLASSICAL (BUREAUCRATIC) ORGANIZATIONAL MODEL

The primary aim of this kind of organization is to group work in the most efficient way according to goals, tasks, and administrative units. It is characterized by structure, a hierarchical line of command, a high degree of functional specialization within the organization, a concern for minimizing the span of management (number of people supervised by one person), and a dependence upon line and staff concepts in the assignment of authority and responsibility (Feyereisen, Fiorino, and Nowak, 1970, pp. 19-23).

[See also: Neoclassical Organizational Model, Modern Organizational Model.]

CLOSED-LOOP SYSTEM

A self-correcting problem-solving system; one which specificially provides for the gathering of information internally for the purpose of redoing or correcting any of the procedural steps followed in the solution of an identified problem (Kaufman, 1970, pp. 138-139). Example of a Closed-Loop System:


Diagrammatic Representation of a Problem-Solving Process
(Revise as Required)
1.0 Identify Problem (from Needs)
2.0 Determine Solution Requirements and Alternatives
3.0 Select Solution Strategy from Alternatives
4.0 Implement Solution Strategy
5.0 Determine Performance Effectiveness

CONSENSUS

A decision made by a group which all members of the group agree to accept at least partially or temporarily.

CONTEXT EVALUATION

"This type of evaluation is systematic and macroanalytic; its purpose is to provide a rationale for determination of objectives for the system. It defines the environment, describes the desired and actual conditions pertaining to the environment, identifies unmet needs and unused opportunities, and diagnoses the problems that prevent needs from being met and opportunities from being used" (Stufflebeam, et al., 1971, p. 353).

[See also: Input Evaluation, Process Evaluation, Product Evaluation, CIPP Evaluation Model.]

CONTROLLING FUNCTION

The management function which "involves the making of decisions related to the timely identification and correction of discrepancies between the program plan and actual program conditions. Control decisions result in the maintenance of program integrity, i.e., in greater assurance that the program will accomplish its objective(s)" (Educational Management Project, 1971, p. 5).

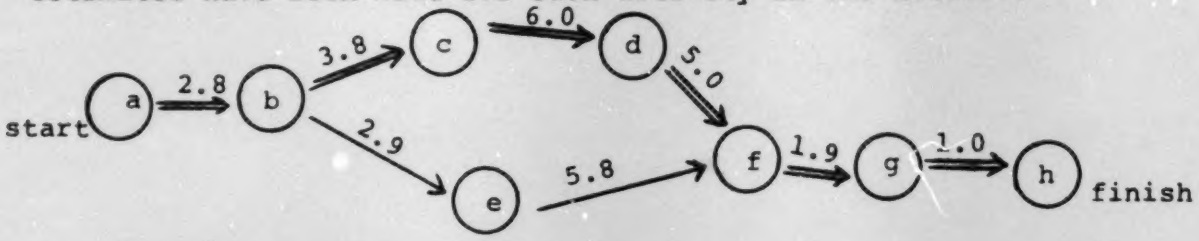
[See also: Planning Function, Directing Function, Organizing Function, the Appendix.]

COST-BENEFIT ANALYSIS

"An analysis relating costs of a program (or an outcome) with the benefits to be accrued from the successful achievement of the outcomes. In its simplest form, cost-benefit analysis asks the two simultaneous questions of 'what do I give?' and 'what do I get?' There are tools for determining actual or predicted cost benefit, including the tools of 'Planning-Programming-Budgeting System (PPBS),' and 'systems analysis.'" (Kaufman, 1972, p. 127)

CRITICAL PATH METHOD (CPM)

Identifying the sequence of events and activities in a program plan which will consume the greatest total amount of time from the beginning to the end of the total project. The Critical Path is charted on a PERT network once minimum and maximum time estimates have been made for each activity in the network.



Critical Path: ⟹

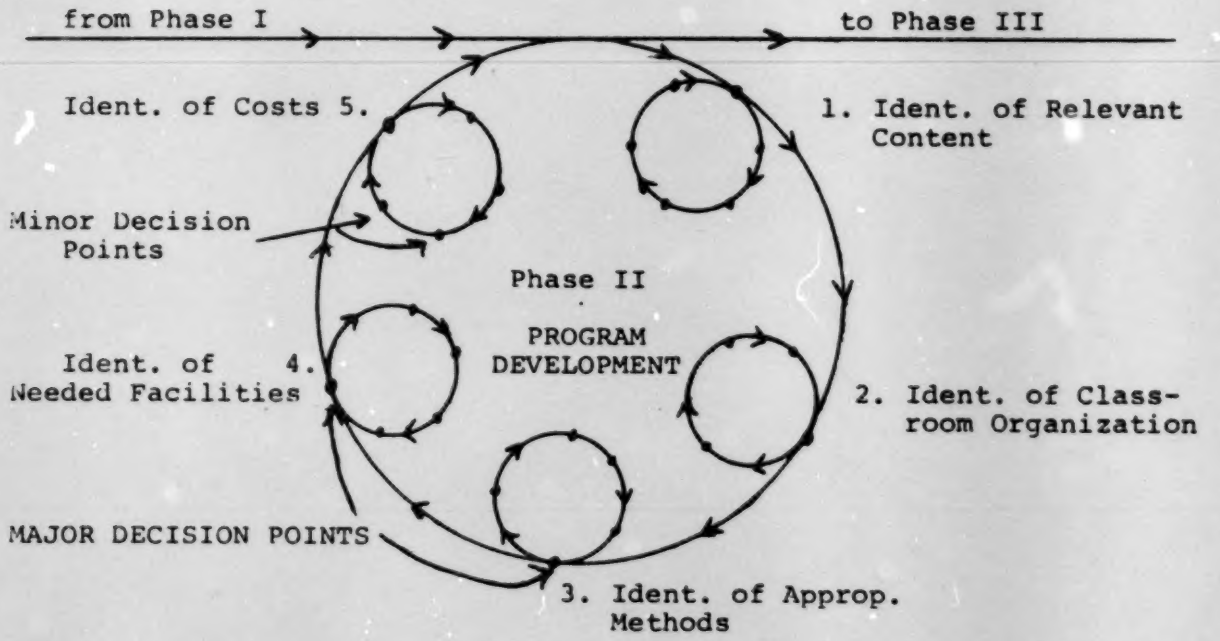
Total maximum time for
a-b-c-d-f-g-h: 20.5 weeks
Total time for
a-b-e-f-g-h: 14.4 weeks

[See also: Program Evaluation and Review Technique.]

CURRICULUM IMPLEMENTATION MODEL (CIBOM)

(The acronym is formed from the formal title of the Model, Curriculum Implementation from a Behavioral Objective Model.) A framework for guiding decision making in three phases of curriculum development: the identification of student behaviors within program objectives, the identification of input for curriculum development, and the implementation of the developed program. The Model is based on the theory that effective curriculum development and implementation is a process of making certain major decisions in a systematic sequence, and that each major decision is, in turn, the result of a systematic sequence of minor decisions.

Part of the Curriculum Implementation Model



(Gazzola, 1971)

DATA

"A general term used to denote any or all facts, numbers, or letters and symbols that refer to or describe an object, idea, condition, situation, or other factor. It connotes basic elements of information..." (AASA Commission on Administrative Technology, 1969, p. 163).

Data may also be defined as observations of any particular event or condition which are arranged and/or classified and then reported in some manner to show relationship (Stufflebeam et al., 1971, p. 123).

[See also: Information.]

DATA PROCESSING

The use of electronic computing equipment to process, store, retrieve, and distribute data.

DELPHI TECHNIQUE

"Delphi is a procedure for structuring judgments [opinions] about future events that were elicited from experts [professionals].... In the procedure, judgments [opinions] are solicited through a series of questionnaires, are combined, and then fed back to the participants along with additional information obtained as part of their response. The participants remain anonymous" (Alkin and Bruno, 1970, p. 223). The Delphi technique is being used in arriving at consensus about issues involved in educational program planning.

DESCRIPTIVE MODE

A method for describing either the actual or ideal operation of any project or program using graphic tools such as organization charts, workbreakdown structures and flow diagrams. Such tools, therefore, are here used to describe either the "what is" state of a system or its "what ought to be" state. The descriptive mode is not prescriptive, however, since it merely describes a system; it neither judges the appropriateness of its goals and objectives nor identifies problems and possible solutions (Kaufman, 1970, pp. 154-5).

[See also: Solution-Implementation Mode, Design-Process Mode.]

DESIGN-PROCESS MODE

A system approach for designing a new system (or program) to accomplish specified outcomes. The design-process mode is a self-correcting (closed-loop) problem-solving process of six major steps:

1. Identify problem (from needs)
2. Determine solution requirements and solution strategies
3. Select solution strategy
4. Implement strategy
5. Determine effectiveness of strategy
6. Revise as required. (This step may become necessary at any point in the first five steps of the process.)

"By formally applying this System Approach Model, we can be assured that a self-correcting strategy is being followed and that relevant and cogent variables will be considered. The formality, openness, and objectivity of the approach reduce the risk of overlooking important elements or using inappropriate solution strategies" (Kaufman, 1970, p. 139).

[See also: Closed-Loop System, Descriptive Mode, Solution-Implementation Mode, Educational Problem, the Appendix.]

DIRECTING FUNCTION

The management function which "involves the making of decisions related to the successful motivation of people who have a role to play in the management (planning, organizing, directing, and controlling) and implementation of a planned program. Directing decisions result in the optimal satisfaction of personal needs concurrent with the accomplishment of program objectives" (Educational Management Project, 1971, p. 5).

[See also: Planning Function, Organizing Function, Controlling Function, the Appendix.]

EDUCATIONAL ADMINISTRATION

The performance of specific tasks and "the execution of management decisions for the purpose of keeping the activities of that part of the educational system for which the administrator is responsible compatible with the goals of the total system" (Educational Management Project, 1971, p. 2). Activities and tasks which are mandated by school law or by state or local school boards are examples of administrative activities.

[See also: Educational Management.]

EDUCATIONAL MANAGEMENT

"The performance of specific tasks and the making of decisions for the purpose of creating, maintaining and improving an educational system" (Educational Management Project, 1971, p. 1). Educational management tasks include tasks related to the planning, organization, direction and control of programs or projects for which the educational manager is wholly accountable to the larger system of which his program is a part.

[See also: Educational Administration.]

EDUCATIONAL MANAGEMENT DECISION

"...[the] choice of the best course of action for reducing or eliminating any discrepancy between actual organizational performance and the objectives of the organization" (Educational Management Project, 1971, p. 6). The major components of any educational management decision are:

Components of a Rational Decision Situation

"WHAT OUGHT TO BE"
(the desired situation)
"WHAT IS"
(the current situation)
ALTERNATIVES
(different ways of getting from "what is" to "what ought to be")

[See also: "What is," "What Ought to Be," Alternative, Need, Educational Problem.]

EDUCATIONAL MANAGER

Any person in an educational system who is wholly responsible for the accomplishment of any specified proportion of the total system's objectives. A superintendent is responsible for the accomplishment of his district's objectives, a building principal is responsible for the accomplishment of his school's objectives, a service department director is responsible for the accomplishment of his department's objectives, a teacher is responsible for the accomplishment of his instructional objectives, and so on. In all cases, the educational manager must plan, organize, direct and control a program for accomplishing these objectives as efficiently and effectively as possible.

EDUCATIONAL PROBLEM

Any measurable discrepancy between "what is being accomplished" and "what should be accomplished" that is judged to be of sufficient importance to merit an attempt at resolution. An educational problem, therefore, is any educational need which is given a high priority by those who will be expected to contribute to the elimination or reduction of that need (Kaufman, 1972, p. 38).

[See also: Need, "What Is," "What Ought To Be," the Appendix.]

EVALUATION

"... the process of delineating, obtaining, and providing useful information for judging decision alternatives" (Stufflebeam, 1971, p. 353).

This process may also be defined as one of designing and implementing a system for the collection, analysis and reporting of appropriate program information to educational program decision makers.

[See also: CIPP Evaluation Model.]

FEEDBACK

The reciprocal flow of information in an organization about how well the actual performance of the system matches the planned performance. "This circular pattern involves the flow of information to the point of action, a flow back to the point of decision with information on the action, and then a return to the point of action with new information and perhaps instructions.... The stress and tensions of the internal operations of the system and environmental influences become the input of the feedback system. This input is analyzed, and, through a decision-making process, solutions, in the form of directions, are fed into the appropriate part of the system to adjust or adapt its operations" (Feyereisen, Fiorino and Nowak, 1971, p. 45).

[See also: Closed-Loop System.]

FLOWCHART

"A pictorial description of a plan showing the interrelationships of all required events. It is also called a network, arrow diagram, etc." (AASA Commission on Administrative Technology, 1969, p. 164). The interrelationships of all events and activities for a planned program are graphically represented as a logical sequence of events and activities from the beginning to the end of the program. The PERT chart is a common example of the flow chart.

[See also: Program Evaluation and Review Technique.]

FORCE FIELD ANALYSIS

A formal technique for the analysis of an identified problem through successive efforts to identify and define restraining and facilitating factors. The technique proceeds in nine steps:

1. Identify the problem/goal.
2. Communicate the problem, attempting to answer the questions, Who/what is causing it? Who/what is affected by it? What kind of a problem is it? What sources of information must be sought to clearly define the problem and the validity of proposed solutions?
3. List forces working for and against the accomplishment of the desired goal.
4. Rate the forces as to their relative importance, clarity and difficulty of eliminating them.
5. Rank the forces.
6. Gather data about the problem.
7. Evaluate data and derive forces not previously known.
8. Derive and state appropriate solution strategy.
9. Evaluate the effectiveness of the solution.

A worksheet for force field analysis:

Forces facilitating goal accomplishment →	← Forces restraining goal accomplishment

FUNCTIONAL AUTHORITY

Basically, line authority which is delegated to a position which ordinarily has a staff relationship to the line of command. There are three levels of delegation of functional authority:

1. Superior delegates to staff person authority to give advice directly to the persons directly under his authority in the line.
2. Superior delegates authority to staff person for not only giving information, advice and recommendations but also to consult with persons under him and to demonstrate applications of recommendations.
3. Superior delegates authority to staff person to prescribe processes, approaches, or even policy and carry through with the supervision of them in operation. (Feyereisen, et al., 1970, p. 22)

GOAL

A statement of a program's expected accomplishments, the ultimate end being sought from the aggregate of activities which constitute the program. In contrast to the objective, the goal is "abstract in content, broad in scope, long in range, and related closely to ultimate ends" (Institute for State Education Agency Planners, 1971, p. 10). Example: "The goal of the 1972-75 XYZ program is to facilitate Our School's students' entry into their chosen careers upon graduation."

[See also: Objective, Policy.]

HUMAN RELATIONS ORGANIZATIONAL MODEL

See Neoclassical Organizational Model.

IMPLEMENTING DECISION

Decisions affecting the day-to-day operation of a program in accord with prespecified plans. These decisions result in a variety of procedural changes, staff reassignments, retraining activities, resource reallocations and the like (Stufflebeam, et al., 1971, p. 83).

[See also: Planning Decision, Recycling Decision, Structuring Decision.]

INFORMATION

The classification and/or arrangement of data or observations in such a manner as to show relationship and to reduce uncertainty on the part of the recipient. Because information depends upon the perception of the recipient, the same arrangement of data may be interpreted differently by different recipients. "A case in point is the meaning attached to achievement data based on socioeconomic breakout. While one group might view the data as providing information on preferential treatment in the system, another might view it as providing information that proves its particular prejudices. Still another group might see the data as providing information on the inadequacy of the teaching staff" (Stufflebeam, 1971, p. 123).

[See also: Data.]

INPUT EVALUATION

"This type of evaluation is essentially ad hoc and microanalytic and its purpose is to provide information for determining how to utilize resources to meet program goals. It identifies and assesses relevant capabilities of the responsible agencies, strategies for achieving program goals, and designs for implementing a selected strategy" (Stufflebeam, 1971, p. 354).

[See also: Context Evaluation, Process Evaluation, Product Evaluation, CIPP Evaluation Model.]

JOB DESCRIPTION

Basically, the major tool for guiding the personnel selection process. The job description (or position guide) is a formal instrument describing the abilities, preparation, experience and skills needed to fill a staff position and the particular duties and responsibilities of the position. This instrument serves two purposes in the staff selection process: it informs the person responsible for personnel selection what to look for in an applicant, and it informs the applicant what the school system is seeking.

Position requirements should be derived from an analysis of the objectives and activities of the program for which the position is needed. Position requirements should be defined as objectively as possible so applicants' qualifications may be objectively appraised (Castetter, 1971, p. 199).

LINE RELATIONSHIP

A relationship in which one position has the authority to direct the operational activities of that position immediately beneath it in the organization's line of command.

[See also: Functional Authority, Staff Relationship, Organizational Structure.]

MANAGEMENT INFORMATION SYSTEM (MIS)

An organizational mechanism for the collection, analysis and distribution to decision makers of information needed to solve educational program problems. Or, "...a network of communication channels (voice, digital, etc.) that acquires, processes, stores, retrieves and redistributes--i.e., manages--data used in managing the 'educational plant' and in supporting the individual and collective decision-making process" (Evans, 1970, p. 257).

METHOD

See Strategy.

METHOD-MEANS ANALYSIS

A reoccurring task in the program planning process in which all possible alternative ways of accomplishing an objective are systematically identified and analyzed for their relative feasibility. The procedure is applied at each successive phase of the planning process, as the stated objectives are made more specific. At each point where a decision must be made about which method is to be used in accomplishing a task, this systematic process of identifying, analyzing and evaluating the various methods which could be used must be followed. This active search for alternative methods and the data pertaining to the suitability of each alternative in terms of estimated cost, time requirements and its likelihood of contributing to the accomplishment of program objectives helps educational decision makers avoid the premature adoption of solution strategies (Kaufman, 1970).

MODERN (SYSTEM APPROACH) ORGANIZATIONAL MODEL

Modern organizational theory views the formal organization as a system-within-a-system, rather than as an independent structure. The modern organization is one which not only recognizes the existence of environmental influences, but provides for constructive, purposeful interaction between itself and its environment. The informal organization, which is the aggregate of informal interrelationships among the members of the formal organization, is considered part of the formal organization's environment as well. To facilitate purposeful interaction between the organization and its environment, the organization must develop institutional mechanisms for the collection, analysis, exchange and utilization of great amounts of information. To deal with this demand for information, organizations have taken advantage of technological advances of both a theoretical and a practical nature.(Feyereisen, Fiorino and Nowak, 1971, Chapter 2).

[See also: Classical Organizational Model, Neoclassical Organizational Model, System.]

NEED

In the area of educational program planning, the discrepancy between what student learning achievement or student learning progress is at the present time and what student learning achievement or progress ought to be. The process of identifying needs, known commonly as "needs assessment" involves the systematic collection and analysis of specific data related to both "what student learning is now" and "what student learning ought to be." In a broader context, such as in the planning of supportive programs for the operation of an educational program, the need is more likely to be associated with the identification of what current service or assistance is being offered, and what service or assistance ought to be offered. In any case, needs must be identified in precise terms before any consideration of solution strategies (Kaufman, 1970, pp. 136-7).

[See also: Educational Problem, "What Is," and "What Ought To Be," the Appendix.]

NEOCLASSICAL (HUMAN RELATIONS) ORGANIZATIONAL MODEL

The term used to describe the organizational theory which developed in the 1930's in reaction to the classical or bureaucratic organization's apparent disregard for the aspirations and motivations of men in organization enterprise. The neoclassical organization characteristically focused on the needs of individuals in the organization and sought to reduce or eliminate the influence of authority as the force determining organizational behavior. The "product-orientation" of the classical organization was rejected in favor of a "process-orientation." Neoclassical organization theory renewed concern for the human aspects of organizations and furthered the study of human behavior as a factor in organizational effectiveness (Feyereisen, Fiorino and Nowak, 1971, pp. 23-25).

[See also: Classical Organizational Model, Modern Organizational Model.]

NON-PROGRAMMED DECISION

A decision which is unstructured, novel and seldom occurring, and for which no routine procedures exist. A situation in which a decision cannot be made by applying established rules, regulations and procedures is a situation which requires a non-programmed decision.

[See also: Programmed Decision.]

OBJECTIVE

A specific statement of the intended accomplishment of an organization or any part of the organization over a specified period of time. It is the end to be accomplished as the result of a series of activities. The objective to be accomplished as the result of a particular set of instructional activities specifies in measurable terms who will learn, what they will learn, by what time they will have learned, and what evidence there will be that this specified learning has taken place. Objectives are also necessary for the activities of an educational organization which are not directly related to instruction. Such objectives do not specify student learning to be accomplished but instead specify (in measurable terms) the intended result or product of a set of non-instructional activities.

Depending upon its area of focus, the "objective" goes by many names such as the performance objective or behavioral objective, the operational or instructional process objective, the management process objective etc. Usage of these terms is not currently uniform, but the general term, "objective," is commonly understood as defined above.

Specifically stated objectives can be formulated throughout an educational organization at all levels, for all areas of activity, from the top administrative levels through the operational level. A well-organized hierarchy of objectives guides and controls the activities of the educational organization. Some examples of objectives at different levels in the area of reading instruction are given below.

State Level: "Ninety percent of the students in Arizona completing the first six years will demonstrate cognitive achievement in math, social studies, and communicative arts equal to the sixth year norms as measured by the S.A.T."

District Level: "At the end of grades three and six, elementary students in the Tucson Public Schools will demonstrate their comprehension of selected reading skills, equal to national norms as measured by the S.A.T."

School Level: "At the end of first grade, the students will demonstrate a comprehension of consonants, vowels, and blends with a minimum of 40 percent accuracy as measured by a teacher-developed test."

(Developing and Writing Behavioral Objectives, 1970, pp. 54-55.)

[See also: Goal, Performance Objective.]

OPEN SYSTEM

A system which interacts with and responds to a changing, evolving environment. The system's response is an attempt to stabilize its relationship to its environment. Such a system is indeterminate in that its objectives and procedures do not remain static but continually change in response to changes in the environment.

A closed system, on the other hand, is one whose objectives and procedures remain relatively constant on the assumption that the characteristics of its environment remain constant as well. Because it operates on this assumption, the closed system makes no provisions for continuous input from the environment (Feyereisen, et al., 1970, pp. 27-28).

> Note: Do not confuse this definition of "open" and "closed" systems with the definition given earlier for the "closed-loop" system, which is related to whether or not a system utilizes a feedback mechanism to adjust its operations in accord with its objectives.

ORGANIZATIONAL CHART

An organizational chart is a skeletal representation of an organization's decision-making structure. It is capable of portraying only the most basic authority/responsibility relationships.

[See also: Organizational Structure.]

ORGANIZATIONAL STRUCTURE

In its simplest form, the organizational structure is the decision-making structure of the organization. Historically, the organizational structure has been synonymous with "line of command," but as the study of organizational theory has progressed, the definition of "organizational structure" has been expanded to include more than a description of "who is to report to whom." The study of organizational communication networks has contributed to this broader conception also.

Defined as a decision-making structure, an organizational structure is a system of decision-making interrelationships. A single position may have several kinds of influence on the making of decisions in the organization. He may make recommendations or suggestions, he may have to be informed of the results of a decision, he may have to be consulted in making a decision, he may have veto power over a decision or he may be responsible for initiating a decision-making process. Describing an organizational structure in terms of a position's multiple influences on organizational decision making results in a more functional but more complex kind of structure (Wallen, 1970).

[See also: Organizational Chart.]

ORGANIZING FUNCTION

The management function which "involves the making of decisions related to the assignment of appropriate resources, authority and responsibility to those people who will manage and implement the planned program. Organizing decisions result in the creation of an organizational environment maximally conducive to the accomplishment of the objectives of the program" (Educational Management Project, 1971, p. 5).

[See also: Planning Function, Directing Function, Controlling Function, the Appendix.]

PARAPHRASING

A communication technique whose purpose is to provide the communicator with evidence that the communicatee has understood his message. In a group situation, a common understanding of issues and points of agreement and disagreement can be reached if statements made by one member of a group are restated by another member. In this way, statements of position are not inadvertently misinterpreted by the members of the group.

PERFORMANCE OBJECTIVE

"Performance objectives in an educational program are precise statements of anticipated project goals in terms of behaviors, outcomes or material items which can be validly measured" (U.S. Office of Education, 1970, p. 48).

A performance objective must specify:

1. the individual or group who will perform the desired behavior.
2. the behavior to be demonstrated or the product to be developed.
3. the primary conditions under which the performance is expected to be measured.
4. the minimum level of acceptable performance.
5. the means or instrument which will be used to measure the expected performance or terminal behavior.

Some examples:

"During an inservice session, the teacher will describe the techniques of constructively handling displays of student hostility after viewing a 30-minute film developed by inservice consultants which shows three classroom incidents. The teacher will describe techniques appropriate to alleviating each situation as determined by his receiving seven of a possible ten points on a rating scale developed and administered by the consultants" (U.S. Office of Education, 1970, p. 52).

"At the completion of 38 weeks of school, those sixth grade students who have completed the school year will show an average increase of five percentile points in reading comprehension as measured by the Iowa Test of Basic Skills" (Performance and Process Objectives, 1970, p. 28).

[See also: Objective.]

PLAN

Any proposed course of action which is oriented toward the future, which indicates the actions to be taken, and which identifies who will take these actions. A program plan is designed to accomplish stated program objectives by means of an ordered series of pre-specified program activities.

[See also: Planning Function, Strategy, Procedure, Activity.]

PLANNING DECISION

Decisions which specify major changes to be made in a program, either in the goal to be accomplished or in the means of accomplishing a goal. These decisions usually result in the formulation of new objectives or the modification of existing ones (Stufflebeam, et al., 1971, p. 81).

[See also: Implementing Decision, Recycling Decision, Structuring Decision.]

PLANNING FUNCTION

The first of the four functions of educational management. This function involves the making of decisions which establish a formal scheme, diagram, or strategy for organizing, directing and controlling the accomplishment of a desired goal.

"Planning is the definition and evaluation of alternative courses of action, and the selection of one alternative course which can be used most effectively and efficiently to satisfy the requirement of a balance between long and short range goals. Planning as a process results in a set of initial decisions which are considered necessary to accomplish the future state of affairs desired by the planner" (Cook, 1971, p. 20).

[See also: Controlling Function, Directing Function, Organizing Function, the Appendix.]

PLANNING, PROGRAMMING AND BUDGETING SYSTEM (PPBS)

PPBS is a way of correlating budgets with specific programs, "which programs, in turn, are tied to goals that the community expects its schools to meet" (Scott, 1971, p. 13). The PPBS process consists of the following steps:

1. Examine district needs and problems.
2. Select and define area for system analysis.
3. Formulate/review goals and objectives.
4. Define overall constraints and general selection criteria.
5. Formulate alternate programs.
6. Determine cost and benefits, activities and required resources for each alternate program.
7. Analyze alternate programs in terms of:
   a. Goals and objectives,
   b. Constraints and requirements,
   c. General selection criteria,
   d. Cost/benefit relationships.
8. Select and implement recommended program.
9. Assess results.

[See also: Program Budget.]

POLICY

Statements or understandings which guide or channel thinking in decision making (Cook, 1970, p. 20).

"They reflect and interpret objectives, channel decisions to contribute to objectives, and thereby establish a framework for planning programs" (Koontz and O'Donnell, 1964, p. 158).

"Policies delimit an area within which a decision is to be made and assure that the decision will be consistent with and contributing to objectives. Policies tend to predecide issues, avoid repeated analysis and consideration of general courses of action, and give a unified structure to other types of plans, thus permitting managers to delegate authority while maintaining control" (Koontz and O'Donnell, 1964, p. 75).

[See also: Plan, Goal.]

PROBLEM

See Educational Problem.

PROCEDURE (PROCESS)

A set of activities arranged in sequential order. Once a strategy has been selected, a step-by-step procedure can be developed for implementing the strategy. A procedure or process may include very general or very specific activities, but, general or specific, a procedure must establish a sequence of activities.

[See also: Plan, Strategy, Activity.]

PROCESS

See Procedure.

PROCESS EVALUATION

"This type of evaluation provides periodic feedback to persons responsible for implementing plans and procedures. It has three objectives: (1) to detect or predict defects in the procedural design or its implementation during the implementation stages, (2) to provide information for programmed decisions, and (3) to maintain a record of the procedure as it occurs" (Stufflebeam, et al., 1971, p. 354).

[See also: Input Evaluation, Product Evaluation, Context Evaluation, CIPP Evaluation Model.]

PROCESS OBJECTIVE

The precise statement of how a performance objective is to be accomplished, a description in measurable terms of the means for accomplishing a prespecified end. The process objective specifies:

1. exactly what the planned activity or task is.
2. what individual or group of individuals is responsible for performing the task.
3. when the task is supposed to be completed.
4. what evidence there will be that the task was done properly.

Example: "By the end of the 1970-71 fiscal year, the Business Office of Education staff will have completed the new guidelines for Exploratory Business Programs and disseminated their report to all ninth and tenth grade teachers in Pueblo School District" (Performance and Process Objectives, 1970, p. 29).

Describing planned activities in the form of a process objective lends precision to a plan and helps the educational manager monitor the progress of his program on a continuous basis.

[See also: Plan, Strategy, Procedure, Activity.]

PRODUCT EVALUATION

"This type of evaluation measures and interprets attainments at the end of the project cycle and as often as necessary during the project term. It assesses the extent to which ends are being attained with respect to change efforts within the system" (Stufflebeam, et al., 1971, p. 354).

[See also: Context Evaluation, Input Evaluation, Process Evaluation, CIPP Evaluation Model.]

PROGRAM BUDGET

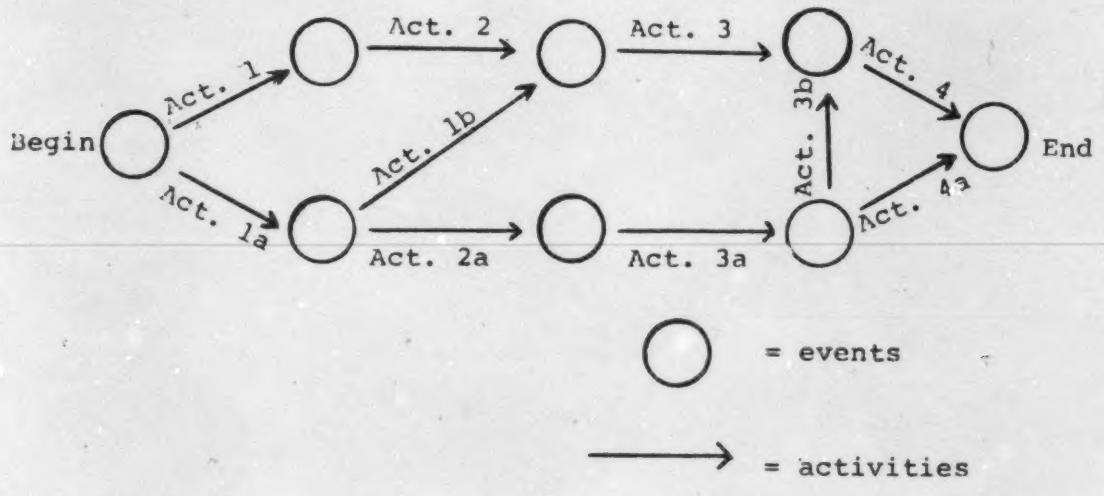
In a Planning, Programming, Budgeting System, the plan that relates proposed expenditures for programs within a specific time frame, to goals and objectives, based on a program structure classification.

[See also: Planning, Programming and Budgeting System (PPBS); Budget.]

PROGRAM EVALUATION AND REVIEW TECHNIQUE (PERT)

PERT is a planning and controlling tool for educational managers which results in a graphic representation of the interrelationships of all planned activities to be undertaken in order to accomplish a specific goal. A PERT chart is an aid to scheduling and resource allocation in that it makes it possible to estimate the amount of time needed to complete each activity and the total amount of time needed to complete the total program from start to finish (Cook, 1971, Chapters 6 and 7).

An example of a PERT chart:



PROGRAMMED DECISION

A decision which is usually repetitive and routine in nature. A routine set of rules and regulations is available to solve a problem when it arises. Examples of decisions of this type include promotion of students, scheduling of classes, allocation of staff and budget.

[See also: Non-Programmed Decision.]

RECYCLING DECISION

Decisions used in determining whether the program should be continued, terminated, evolved or drastically modified. These decisions result in expansion of the program, continued funding, or discontinuation of the program (Stufflebeam, et al., 1971, p. 83-84).

[See also: Planning Decision, Implementing Decision, Structuring Decision.]

REGULATION (RULE)

The simplest type of plan, a course of required action. A regulation requires that a specific and definite action be taken with respect to a situation. It differs from a procedure in that a regulation does not specify a time sequence. Procedures may incorporate regulations (Koontz and O'Donnell, 1964, p. 77).

[See also: Policy, Procedure.]

RULE

See Regulation.

SIMULATION

The building and using of a model of a real or predicted event or situation. Construction and pilot-testing of models help in the prediction of the effectiveness and efficiency of a proposed program design.

SOLUTION IMPLEMENTATION MODE

A solution-oriented approach to problem solving. In using the approach, it is assumed that a valid need exists for the solution strategy to be adopted and that the solution strategy, when implemented, will be compatible with all existing units or subsystems of the total system. "In the application of many computer-aided instruction systems, for example, the learning content is assumed to be viable; the only perceived need is for a more effective and efficient format to present that content to learners."

Educational program changes which involve the adoption of "packaged solutions" without the prior analysis and verification of the underlying problems which point to the need for change are changes made using the solution-implementation mode (Kaufman, 1970, pp. 151-152).

[See also: Design-Process Mode, Descriptive Mode.]

S-T-P PROBLEM ANALYSIS

A method of organizing information to define a problem and to resolve or manage conflict that occurs in creating a solution. Information is organized into three interrelated dimensions.

The Situation Dimension: Information about (a) the essential features of the current state and (b) the forces that facilitate and that impede moving to a more desired state.

The Target Dimension: The desired state. What we want to accomplish and to avoid. Targets are chosen because those working on the problem value and desire them; they are not imposed. (Imposed requirements are part of the situation dimension.)

The Proposal/Plan Dimension: Specific action proposals aimed at changing the current state into the desired state. "Who will do what by when?" Any proposal for action always implies some view of the situation and of the target.

STAFF RELATIONSHIP

A relationship in which a person in one position serves in an advisory capacity to a position in the organization's line of command. The "line" person conveys advice, recommendations, and information to his line subordinates at his discretion; the "staff" person ordinarily does not deal directly with the line subordinate in any way.

STRATEGY (METHOD)

"A general program of action and deployment of emphasis and resources to attain comprehensive objectives" (Koontz and O'Donnell, p. 119). The strategy is the most general of the kinds of "means" which are considered in the planning process. Once goals and objectives (the "ends") have been determined, the next thing to do is to consider alternate strategies for accomplishing the goals and objectives. Two common examples of teaching strategies are the "lecture method" as opposed to the "discussion method."

[See also: Procedure, Plan, Activity.]

STRUCTURING DECISION

Decisions which concern the processes which are to be used in accomplishing program objectives. These decisions result in an operational plan of action which specifies such variables as method, content, organization, personnel, schedule, facilities and budget (Stufflebeam, et al., 1971, p. 81-82).

[See also: Planning Decision, Implementing Decision, Recycling Decision.]

SYSTEM

"An orderly combination of interrelated and interacting parts which constitute a rational whole for the purpose of achieving commonly accepted and specific objectives" (Educational Management Project, 1971, p. 2).

Any educational program may be thought of as a system in which an orderly combination of activities and processes interact in such a way as to result in the achievement of explicit program objectives in an effective and efficient manner.

SYSTEM ANALYSIS

The process of identifying in a step-by-step fashion by analysis of a system's parts 1)what is required to satisfactorily solve an identified educational problem and 2) what possible alternative solutions to the problem exist that will meet these requirements. The process of system analysis results in input (information) for decision making in the planning of any program to accomplish specified objectives.

SYSTEM APPROACH

A method of a) identifying problems, b) analyzing problems, c) identifying possible solutions, d) selecting solutions, e) implementing solution strategies and f) evaluating the effectiveness of these strategies. While various system approach strategies have been developed, such as the Design-Process Mode, the Descriptive Mode, the Solution-Implementation Mode, and PPBS, all are based on the theory and principles governing a system. Most system approaches are rational processes for the collection, analysis and evaluation of information about the characteristics of the system which is being created or redesigned. Very similar to scientific inquiry, a system approach is any step-by-step information-centered method of solving complex problems.

[See also: Design-Process Mode, the Appendix.]

SYSTEM APPROACH ORGANIZATIONAL MODEL

See Modern Organizational Model.

TASK

See Activity.

"WHAT IS"

The term used to describe the particular existing conditions which have a bearing on the identification, analysis and solution of a perceived problem. Identifying "what is" is one of the first steps in the assessment of educational needs. Unless all assumptions and starting conditions are explicitly identified and defined, it is virtually impossible to identify what is required to accomplish a particular objective or set of objectives. The educational manager must identify and define both the "what is" conditions and the "what ought to be" conditions before he can develop a reasonable estimate of the requirements for solving an educational problem.

[See also: Educational Problem, Need, "What Ought To Be," Alternative, the Appendix.]

"WHAT OUGHT TO BE"

The term used to describe the particular intended conditions which will prevail after the successful implementation of a problem solution strategy. In educational program planning, the identification and definition of "what ought to be" provides the basis for formulating objectives in precise measurable terms. The clear definition of "what is" conditions and "what ought to be" conditions makes it possible for the educational manager to identify exactly what increment in performance is required to satisfactorily solve an identified educational problem. Both "what is" and "what ought to be" must be defined as specifically as available knowledge and information will allow. A statement of "what ought to be" in general terms, as a positively-stated "what is" statement, is not as helpful to the educational manager. Both must eventually be stated precisely enough that criteria for satisfactory problem solution can be developed from the discrepancy between "what is" conditions and "what ought to be" conditions.

An example of imprecise statements of "what is" and "what ought to be":

"What is" statement: Our sixth-grade students cannot perform in math computation at their grade level.

"What ought to be" statement: Our sixth grade students should be able to perform in math computation at the sixth-grade level.

An example of more precise statements:

"What is" statement: In April, 1970, 82 percent of our sixth grade students received scores on the Math Computation section of the XYZ Math Achievement Test which were equivalent to performance below the national norm of 6.8 (grade equivalent).

"What ought to be" statement: In April, 1971, no more than 60 percent of the seventh grade students will receive scores on the Math Computation section of the XYZ Math Achievement Test equivalent to performance below the national norm of 7.8 (grade equivalent).

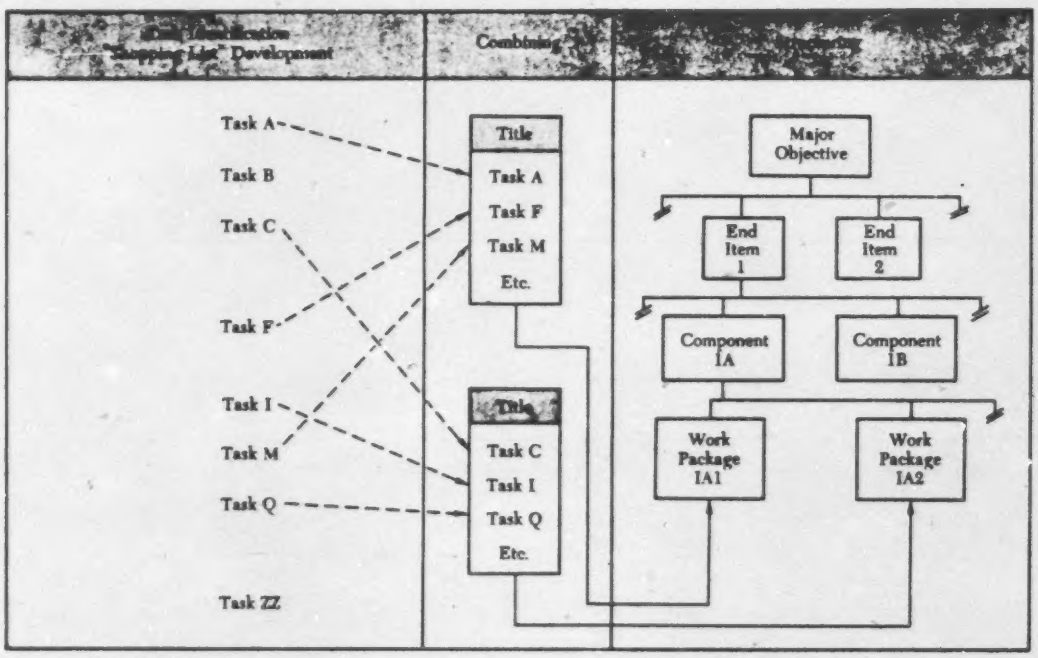
[See also: Educational Problem, Need, "What Is," Alternative, the Appendix.]

WORKBREAKDOWN STRUCTURE (WBS)

"A hierarchically ordered structure of the major and subordinate objectives which reflect work [tasks and activities] that has to be accomplished to reach the overall goal of the project and which are expressed as products or functions along with performance specifications or criteria of their accomplishment" (Cook, 1971, p. 190).

After the educational manager has selected a general solution strategy for dealing with an identified educational problem, he must identify, define and organize the many tasks and activities that the selected strategy requires. The work-breakdown structure (WBS) is a useful tool for this task in that it helps the educational manager classify activities in such a way that all are directly or indirectly associated with his program objectives. The WBS helps him also by discouraging the inclusion of program activities which would not contribute to the accomplishment of stated objectives.

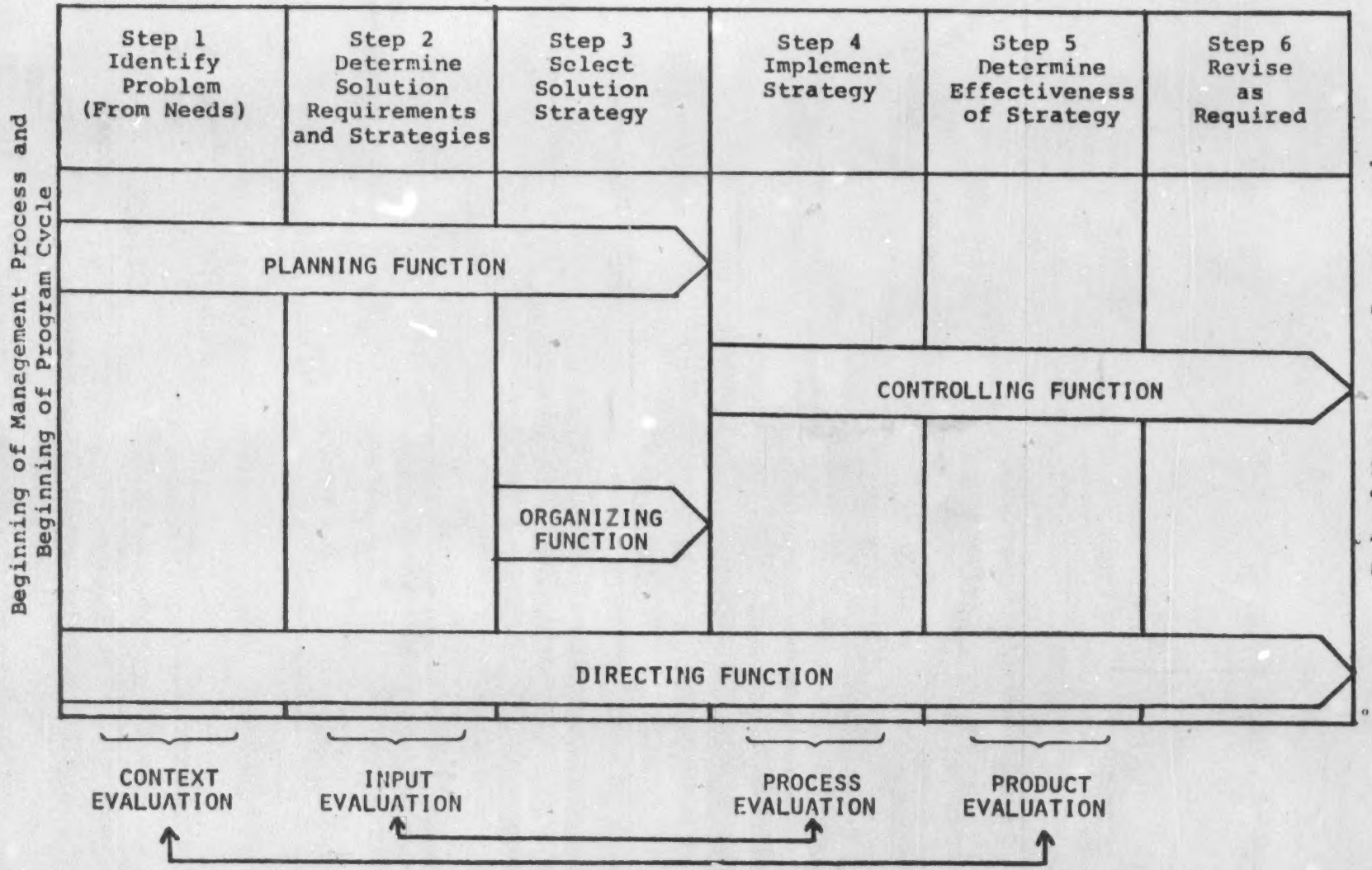
The WBS is usually a graphic representation of the components of a planned program and their interrelationships. Specific activities are labeled by the names of the tangible or observable product which are their results; activities are broken down into progressively smaller units until the manager achieves the amount of detail in his program plan that would enable him to monitor and control the progress of the program when implemented.



(Cook, 1971, p. 75)

APPENDIX

THE FOUR MANAGEMENT FUNCTIONS AND THE DESIGN-PROCESS MODE OF PROBLEM-SOLVING


Step 1 Identify Problem (From Needs)
Step 2 Determine Solution Requirements and Strategies
Step 3 Select Solution Strategy
Step 4 Implement Strategy
Step 5 Determine Effectiveness of Strategy
Step 6 Revise as Required
Beginning of Management Process and Beginning of Program Cycle
End of Management Process and End of Program Cycle
PLANNING FUNCTION
CONTROLLING FUNCTION
ORGANIZING FUNCTION
DIRECTING FUNCTION
CONTEXT EVALUATION
INPUT EVALUATION
PROCESS EVALUATION
PRODUCT EVALUATION

REFERENCES

AASA Commission on Administrative Technology. *Administrative technology and the school executive.* Washington: American Association of School Administrators, 1969.

Alkin, M.C. & Bruno, J.E. System approaches to educational planning. Part IV in P.K. Piele & T.L. Eidell (Eds.), *Social and technological change: Implications for education.* Eugene, Oregon: CASEA, 1970.

Castetter, W.B. *The personnel function in educational administration.* New York: MacMillan, 1971.

Cook, D.L. *Educational project management.* Columbus: McGraw-Hill, 1971.

Developing and writing behavioral objectives. Tucson: Educational Innovators Press, 1970.

Educational Management Project (E.S.E.A. Title III). Concepts and principles of educational management: An introduction. Unpublished manuscript, Tucson Public Schools, 1971.

Evans, J.A. Educational management information systems: Progress and prospectives. Part V in P.K. Piele & T.L. Eidell (Eds.), *Social and technological change: Implications for education.* Eugene, Oregon: CASEA, 1970.

Feyereisen, K.V., Fiorino, A.J., & Nowak, A.T. *Supervision and curriculum renewal: A systems approach.* New York: Appleton-Century-Crofts, 1970.

Gazzola, P. *Curriculum implementation from a behavioral objective model.* Tucson: Tucson Public Schools, 1971.

Institute for State Education Agency Planners, *Planning: Formulation of SEA goals and objectives.* Mankato, Minn.: Mankato State College, August, 1971, Guide #12.

Jung, C.C. Force field technique of diagnosing a problem. Unpublished manuscript, Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, University of Michigan, September, 1966.

Kaufman, R.A. *Educational system planning.* Englewood Cliffs: Prentice-Hall, 1972.

Kaufman, R.A. System approaches to education: Discussion and attempted integration. Part III in P.K. Piele & T.L. Eidell (Eds.), *Social and technological change: Implications for education.* Eugene, Oregon: CASEA, 1970.

Koontz, H.D. & O'Donnell, C. *Principles of management: An analysis of managerial functions.* New York: McGraw-Hill, 1964.

Lessinger, L. Engineering accountability for results in education. *Phi Delta Kappan,* 1970, 52(4), 217-225.

Lopez, F.M. Accountability in education. *Phi Delta Kappan,* 1970, 52(4), 231-235.

Performance and process objectives. Tucson: Educational Innovators Press, 1970.

Scott, D. How PPBS is being used in California. *School Management,* February, 1971, 12-15.

Stufflebeam, D.L., et al. (PDK National Study Committee on Evaluation). *Educational evaluation and decision making.* Itasca, Ill.: F.E. Peacock Publishers, 1971.

U.S. Office of Education. *A manual for project applicants and grantees.* Special Programs and Projects, Title III, Section 306. December, 1970.

Wallen, J.L. *Charting the decision making structure of an organization.* Program Report: Improving Teaching Competencies. Northwest Regional Laboratory. Portland, Oregon, 1970.